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We claim:

1. An isolated nucleic acid molecule selected from:

(a) the polynucleotide sequence of SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:8;

(b) an isolated nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid sequence of (a) under conditions of moderate stringency in about 50% formamide and about 6X SSC at about 42°C with washing conditions of approximately 60°C, about 0.5X SSC, and about 0.1% SDS;

(c) an isolated nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid sequence of (a) under conditions of high stringency in about 50% formamide and about 6X SSC, with washing conditions of approximately 68°C, about 0.2X SSC, and about 0.1% SDS;

(d) an isolated nucleic acid molecule derived by *in vitro* mutagenesis from SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:8;

(e) an isolated nucleic acid molecule degenerate from SEQ ID NO:1, SEQ ID NO:2, or SEQ ID NO:8, as a result of the genetic code; and

(f) an isolated nucleic acid molecule selected from the group consisting of human PCGEM1 DNA, an allelic variant of human PCGEM1 DNA, and a species homolog of PCGEM1 DNA.

2. A recombinant vector that directs the expression of the nucleic acid molecule of claim 1.

3. A host cell transfected or transduced with the vector of claim 2.

4. The host cell of claim 3 selected from bacterial cells, yeast cells, and animal cells.

5. An isolated nucleic acid molecule comprising the polynucleotide sequence selected from SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, and SEQ ID NO: 22.

6. A method of detecting prostate cancer in a patient, the method comprising:

(a) detecting PCGEM1 mRNA in a biological sample from the patient; and

(b) correlating the amount of PCGEM1 mRNA in the sample with the presence of prostate cancer in the patient.

7. The method according to claim 6, wherein step (a) includes:

(a) isolating RNA from the sample;

(b) amplifying a PCGEM1 cDNA molecule;

(c) incubating the PCGEM1 cDNA with the nucleic acid according to claim 1 or 5; and

(d) detecting hybridization between the PCGEM1 cDNA and the nucleic acid.

8. The method according to claim 7, wherein the PCGEM1 cDNA is amplified with at least two nucleotide sequences selected from SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, SEQ ID NO: 20, SEQ ID NO: 21, and SEQ ID NO: 22.

9. The method according to claim 8, wherein the at least two nucleotide sequences are SEQ ID NO:15 and SEQ ID NO:22.

10. A method according to claim 6, wherein the biological sample is selected from blood, urine, and prostate tissue.

11. The method according to claim 10, wherein the biological sample is blood.

12. A vector, comprising a PCGEM1 promoter sequence operatively linked to a nucleotide sequence encoding a cytotoxic protein.

13. The vector of claim 12, wherein the PCGEM1 promoter sequence is a nucleic acid molecule comprising the polynucleotide sequence of SEQ ID NO:3.

14. A method of selectively killing a prostate cancer cell, the method comprising:

(a) introducing the vector according to claim 12 to the prostate cancer cell under conditions sufficient to permit selective cell killing.

15. The method according to claim 14, wherein the cytotoxic protein is selected from ricin, abrin, diphtheria toxin, p53, thymidine kinase, tumor necrosis factor, cholera toxin, *Pseudomonas aeruginosa* exotoxin A, ribosomal inactivating proteins, and mycotoxins.

16. A method of identifying an androgen-responsive cell line, the method comprising:

(a) obtaining a cell line suspected of being androgen responsive,

(b) incubating the cell line with an androgen; and

(c) detecting PCGEM1 mRNA in the cell line,

wherein an increase in PCGEM1 mRNA, as compared to an untreated cell line, correlates with the cell line being androgen responsive.

17. A method of measuring the responsiveness of a prostate tissue to hormone-ablation therapy, the method comprising:

(a) treating the prostate tissue with hormone ablation therapy; and

(b) measuring PCGEM1 mRNA in the prostate tissue following hormone ablation therapy,

wherein a decrease in PCGEM1 mRNA, as compared to an untreated cell line, correlates with the prostate tissue responding to hormone ablation therapy.